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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,393	10/29/2003	Colt R. Correa	2485-000001/CPA	6397
27572 7590 10/03/2007 HARNES, DICKY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER WEI, ZHENG	
			ART UNIT 2192	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/696,393

Applicant(s)

CORREA, COLT R.

Examiner

Zheng Wei

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-8, 10-12, 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-8, 10-12, 14-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 07/11/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Remarks

1. This office action is in response to the amendment filed on 07/09/2007.
2. Claims 2-4, 9 and 13 have been canceled.
3. Claims 1, 8, 10, 14 and 15 have been amended.
4. Claims 16-19 have been added.
5. The objection to claims 2 and 8 are withdrawn in view of the Applicant's cancellation of claim 2.
6. Claims 1, 5-8, 10-12 and 14-19 remain pending and have been examined.

Information Disclosure Statement

7. The information disclosure statements filed on 07/11/2007 has been placed in the application file and the information referred to therein has already been considered.

Response to Arguments

8. Applicant's arguments filed on 07/09/2007, in particular on pages 10-11, have been fully considered but they are not persuasive. For example:
 - At page 9, section "REJECTION UNDER 35 U.S.C. § 101", The Applicant amended the claim 10, but still fails to remedy the 35 USC 101 nonstatutory problem. The claim recites a computer-implemented calibration system which can be interpreted as a computer system or a software system (computer

program product). However, as the Examiner treats it as a computer system, the claimed system should further comprise hardware components e.g. processor or memory... to permit the computer program's functionality to be realized. Moreover, if the Applicant claims "the computer-implement calibration system" as a computer program product, it has to store computer software program in a computer readable storage medium and can be executed by computer to permit the computer program's functionality to be realized. Therefore, claims 10-15 are directed to non-statutory subject matter.

- At page 10, last paragraph, the Applicant argues that Karp does not teach identifying and replacing an instruction that accesses a RAM variable. However, the Examiner respectfully disagrees. As Karp discloses at paragraph [0023], "One example of a hint instruction is a pre-fetch instruction that includes a pre-fetch address. The processor 10 executes a pre-fetch instruction by fetching a set of data from a memory using the pre-fetch address". For fetching a set of data from a memory, the instruction has to be able to access the memory (RAM). Therefore, Karp does disclose and teaches identifying and replacing an instruction that accesses a RAM variable to fetch data.
- At page 11, second paragraph, the Applicant contends that Karp does not teach or suggest the hint instructions operate to change a value of the variable. However, as Karp disclosed in Fig.3, step 114, "Setup the Hint Parameters to be Loaded into the Hint Register" and also discloses in

paragraph [0037], "the processor 11 obtains a next set of hint parameters...and loads the next set of hint parameters Px+1 into the hint register 12". Karp also discloses at paragraph [0047] about changing the value (Hint parameters) in register (see for example, When a first special type of break instruction is encountered, the processor 11 branches a target address specified in the hint register in the hint register 12 and inserts the address of the instruction that caused the break into the hint register 12). Therefore, Karp does discloses the hint instruction operate to change the hint parameter in the register.

Claim Objections

9. Claim 1 and 5-8 are objected to because of the following informalities:

Claim 8:

Claim 8 depends on a cancelled claim 2. For the purpose of compact prosecution, the Examiner treats claim 8 is a dependent claim of claim 1.

Claims 1 and 5-8:

Claims 1 and 5-8 recite the limitation "the value" that lacks antecedent basis

Appropriate correction is required.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 10-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 10: Claim 10 claims a system, which comprises an instruction locator and an instruction replacement component. However, both of these components are software components implemented by instruction sequences. Such claimed software module/programs are software program listings per se and they do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized. Therefore, claim 10 is not statutory. See MPEP 2106.01(I)

Claims 11-15: Claims 11-15 are dependent claims of claim 10. These claims all fail to remedy the 35 USC 101 nonstatutory problem of claim 10.

--These rejections can be overcome by adding computer hardware components e.g., memory, and processor into the claims that permit the computer program's functionality to be realized.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1, 5-8, 10-12 and 14-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Karp (Karp et al., US 2003/0061598)

Claim 1:

Karp discloses a method for controlling the value of a RAM variable inside an executable program, comprising:

- presenting a software program in executable form (object code) and having a plurality of machine instructions of a finite quantity of fixed lengths (see for example, Fig.1 element 60 and related text; also see p.1, [0019], lines 1-3, "The object code includes a sequence of instructions I1 though In object code");
- identifying at least one machine instruction that accesses a variable defined in random access memory associated with the software program (see for example, Fig.1, element 14, Fig.2, element 15, "Object Code Adapter" and related text; also see p.2, [0031], "uses the present techniques to adapt a set of object code");
- replacing the identified machine instruction in the executable form of the software program with a branch instruction that references an address outside an address space of the software program (see for example, Fig.1, element 14, "O Object Code Adapter" and related text; also see p.1, [0020],

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“the object code adapter adapts the object code by providing hit instructions”; also see Fig.1, element 62 and related text; also see, p.1, [0021], “replaces the instruction I3 with a break instruction B1”);

- Defining a set of relocated instructions at the address referenced by the branch instruction, wherein the set of relocated instructions function to change a value of the variable (see for example, paragraph [0034], TABLE 1 - the example of hint table and related text); and
- Executing the executable form of the software program having the branch instruction (see for example, p.2, [0032], “for execution by the processor by inserting a set of break instructions”; also see paragraph [0047], “the processor 11 branches to a target address specified in Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to hint register and inserts the address of the instruction that caused the break into the hint register 12”).

Claim 5:

Karp further discloses the method of claim 1 wherein the step of identifying at least one machine instruction further comprises

- determining location information for the at least one machine instruction within the software program (see for example, Fig.4, steps 110 “Examine the Instruction Stream” and related text).

Claim 6:

Karp also discloses the method of claim 5 wherein the step of determining location information further comprises

- identifying an address for the at least one machine instruction using the image of the executable containing the machine instructions that comprise the executable (see for example, Fig.2 elements 11 Processor, 20 Memory, element 18 and element 15 Object Code Adapter and related text; also see Fig.4, steps 110 "Examine the Instruction Stream" and related text).

Claim 7.

Karp further discloses the method of claim 6 wherein the step of replacing the at least one machine instruction further comprises

- inserting the replacement instruction into a program memory image of the software program at said address (see for example, Fig.4, step 112, "Insert a Break Instruction into the Instruction Stream Where Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Hint instruction is to be Executed" and related text).

Claim 8.

- Karp also discloses the method of claim [2] 1, wherein said branch instruction references a set of relocation instruction residing outside an address space for the software program (see for example, p.2, [0028] "the processor 10 may

be designed to branch to a predetermined address").

Claims 10-12 and 14-15:

Claims 10-12 and 14-15 are system version for performing the claimed method as in claims 1 and 5-8 addressed above, wherein all claimed limitation functions have been addressed and/or set forth above and certainly a computer system would need to run and/or practice such function steps disclosed by reference above. Thus, they also would have been obvious (see for example, Fig.5-6 and related text; also see, p.4, lines 10-42).

Claims 16-19:

Claims 16-19 are another version of the claimed method, wherein all claimed limitation functions have been addressed in claims 1 and 5-8 above respectively. Thus, they also would have been obvious in view of reference teachings above.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Applicant's arguments with respect to claims rejection have been considered but are moot. Applicant's amendment necessitated additional clarification provide hereon based on the rejection of the claims over prior art in the previous office

action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW



TUAN DAM
SUPERVISORY PATENT EXAMINER